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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|---------------------|------------------|
| 10/627,437 | 07/25/2003 | Peter Deane | NSC1P269/P05569 | 5227 |
| 22434 | 7590 | 06/17/2005 | EXAMINER | |
| BEYER WEAVER & THOMAS LLP | | | PAK, SUNG H | |
| P.O. BOX 70250 | | | ART UNIT | PAPER NUMBER |
| OAKLAND, CA 94612-0250 | | | 2874 | |

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/627,437 | DEANE, PETER | |
| | Examiner | Art Unit | |
| | Sung H. Pak | 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 April 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 and 9-15 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-7 and 9-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 July 2003 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's response filed 4/14/2005 has been entered. By this amendment, subject matters from claims 8 and 16 are incorporated into their respective independent claims 1 and 10. Claims 8 and 16 are therefore cancelled. Claims 1-7, 9-15 are now pending.

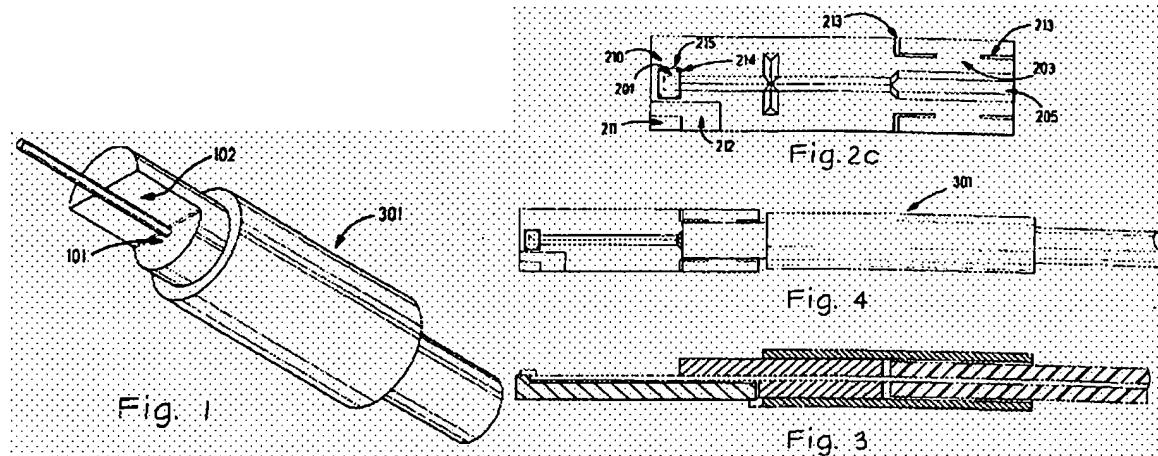
All pending claims have been carefully reconsidered in view of the claim amendment, and the accompanying argument for patentability. However, pending claims remain unpatentable and the claims are rejected over the prior art of record. Please refer to Response to Arguments below for details.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 10-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roff (US 5,764,836) in view of Sasaki et al (US 5,960,141).



Roff discloses an optical device including: a bench having an optical component (Fig. 2c); a groove formed in the bench, the groove configured to accommodate an optical fiber (Fig. 2c; column 2 lines 48-50); a ferrule, including a recess region ('101' Fig. 1) to accommodate the optical fiber when the ferrule is mounted onto the bench, the groove and the ferrule being configured to passively aligning the optical fiber and the optical component on the bench (abstract); wherein the groove comprises a V-groove (column 2 lines 48-50); wherein the ferrule is stepped in shape (Fig. 1); wherein the bench is made from etched silicon (column 4 line 5-12); wherein the device may further comprise a lens formed between the end of the fiber and the optical component (column 5 lines 7-11); wherein the optical component may be an optical receiver (column 4 lines 12-21); wherein the optical component may be an optical transmitter (column 4 lines 21-25).

Regarding claims 10-15, since Roff discloses an optical device with all the limitations set forth in the claims, it inherently teaches the method of assembling such a device comprising the steps of providing optical elements as discussed above.

Roff discloses an optical device with limitations set forth in the claims as discussed above, except it does not explicitly teach the use of a sleeve configured to accommodate the silicon bench and the ferrule, the sleeve further comprising a receptacle configured to receive a plug-in connector which optically couples a fiber cable or a fiber optic network link.

However, Sasaki reference explicitly teaches an optical transmission terminal device utilizing a sleeve configured to accommodate the silicon bench and the ferrule, the sleeve further comprising a receptacle configured to receive a plug-in connector which optically couples a fiber cable or a fiber optic network link (Fig. 9-10). Such sleeve element is considered advantageous and desirable in the art because it effectively protects the optical connection between the optical bench and the optical fiber from harsh environmental factors, and it provides a secure and precise connection between the optical fiber and the plug-in connector in a cost-effective manner.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Roff device to have a sleeve configured to accommodate the silicon bench and the ferrule, the sleeve further comprising a receptacle configured to receive a plug-in connector which optically couples a fiber cable or a fiber optic network link.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Roff (US 5,764,836) and Sasaki et al (US 5,960,141) as applied to claims above, and further in view of Tabuchi et al (US 5,757,999).

Roff, in view of Sasaki, renders all the claimed limitations obvious as discussed above, except it does not explicitly teach the use of plurality of optical components, lenses, and grooves, wherein each of the grooves are configured to accommodate plurality of optical fibers, wherein

the ferrule is configured to accommodate plurality of fiber for passive alignment with the optical components.

On the other hand, Tabuchi reference explicitly teaches an optical communications device utilizing plurality of optical components, lenses, and grooves, wherein each of the grooves are configured to accommodate plurality of optical fibers, wherein the ferrule is configured to accommodate plurality of fiber for passive alignment with the optical components (Fig. 33; column 30 lines 16-44). Such configuration is considered advantageous and desirable in the art because it allows for simultaneous transmission of plurality of optical signals, increasing the transmission bandwidth and efficiency of the resulting optical communications device.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Roff device to have plurality of optical components, lenses, and grooves, wherein each of the grooves are configured to accommodate plurality of optical fibers, wherein the ferrule is configured to accommodate plurality of fiber for passive alignment with the optical components.

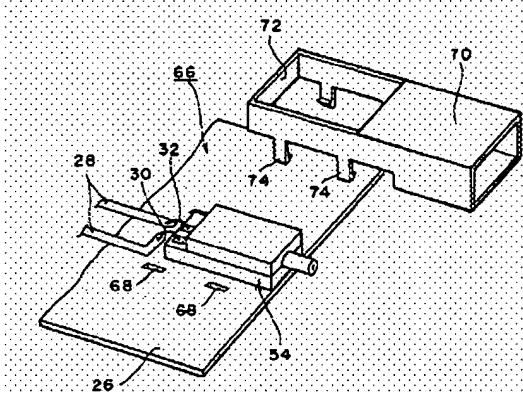
Response to Arguments

Since the limitations of claims 8 and 16 were incorporated into the independent claims 1 and 10, respectively, the ground of rejection has been changed in this office action to reflect such claim amendment.

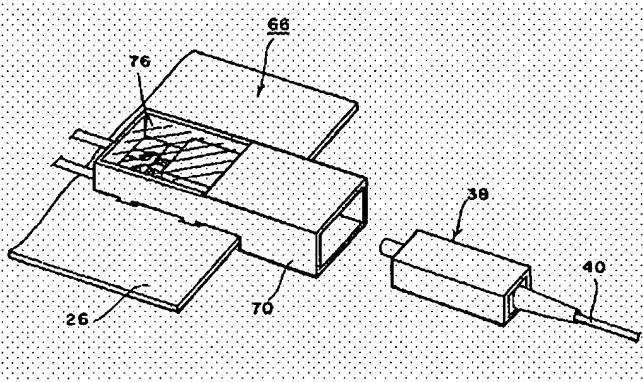
Starting on page 5, paragraph 2, it is argued that "... neither Roff or Sasaki, either alone or in combination, teach or suggest a sleeve with a receptacle having a first opening configured to receive the silicon bench and ferrule..."

The examiner respectfully submits that the argument is not persuasive and the pending claims remain unpatentable. As discussed in the previous office action, and maintained in the present office action, figures 9-10 explicitly show a sleeve (area pointed by the reference character '72' + '70' - the unitary piece having these two parts) having a receptacle having a first opening (opening under the area designated with the reference character '72') and a second opening (opening inside the area designated with the reference character '70'), the first opening being configured to receive within the receptacle, the silicon bench and ferrule (explicitly shown in Fig. 10), and the second opening being configured to receive a plug-in connector ('38' Fig. 10) within the receptacle of the sleeve. Please refer to figures below.

F I G. 9



F I G. 10



Since Sasaki fully teaches and illustrates the use of "sleeves" and "receptacles" as discussed in the previous office action and maintained in this office action, the claim rejections are deemed proper.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2874

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak
Patent Examiner
Art Unit 2874

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